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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,661

02/25/2005

Carsten Springhorn

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NEW YORK, NY 10004

EXAMINER

BALL, JOHN C

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,661	Applicant(s) SPRINGHORN ET AL.	
	Examiner J. CHRISTOPHER BALL	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15 and 17-21 is/are allowed.
- 6) ☒ Claim(s) 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This Office Action is based on the Reply under 37 CFR 1.116, filed with the Office on May 4, 2009, regarding the SPRINGHORN et al. application.
2. Claims 11-15 and 17-22 are currently pending and have been fully considered.
3. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over IMAMURA et al. (US 6,338,782 B1).

IMAMURA et al. discloses a gas sensor usable for measurement of an exhaust gas (Col. 1, lines 5-10), comprising: a measuring device configured to detect a physical property of the gas, in the form of a measurement gas chamber (Col. 4, lines 5-10); a heating device including a heater (50, Figure 4), which is electrically connected to a first heater supply lead (552, Figure 4) and a second heater supply lead (551, Figure 4); wherein the first heater supply lead is arranged in a plane of stratification between the second heater supply lead and the measuring device (10, Figure 4) and the first heater supply lead is at an at least constant electrical potential, in the form of "a low-voltage" (Col. 5, lines 60-61).

IMAMURA does not explicitly disclose the heater is energized and de-energized by the change in potential of the second heater supply lead to adjust a predetermined temperature of the measuring device. However, IMAMURA explicitly discloses that temperature change adversely affects measured gas concentration (Col. 3, line 66 – Col. 4, line 2). It would be, therefore, obvious to one of ordinary skill in the art to maintain a constant temperature for optimal

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functioning of the gas sensor as taught by IMAMURA. It would be obvious for a skilled artisan to try alternatively energized and de-energized the heater by the change in potential of the heater supply lead, among other established means, to control the temperature of the gas sensor. (*KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385 (2007))

Allowable Subject Matter

7. Claims 11-15 and 17-21 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: Independent claim 1 has been amended to recite, *inter alia*, the second heater supply lead forms a continuous printed trace with the heater; independent claim 21 has been amended to recite, *inter alia*, the second heater supply lead extending from the heater. These limitations were not found to be anticipated after a search of the prior art, nor are they obvious to a skilled artisan to include as part of the sensor element. The closest prior art is IMAMURA et al. (US 6,338,782 B1), which has been previously made of record. IMAMURA et al. discloses a gas sensor usable for measurement of an exhaust gas (Col. 1, lines 5-10), comprising: a measuring device configured to detect a physical property of the gas, in the form of a measurement gas chamber (Col. 4, lines 5-10); a heating device including a heater (50, Figure 4), which is electrically connected to

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a first heater supply lead (552, Figure 4) and a second heater supply lead (551, Figure 4); wherein the first heater supply lead is arranged in a plane of stratification between the second heater supply lead and the measuring device (10, Figure 4) and the first heater supply lead is at an at least constant electrical potential, in the form of "a low-voltage" (Col. 5, lines 60-61). However, IMAMURA does not teach or suggest the limitations of the second heater supply lead forms a continuous printed trace with the heater or the second heater supply lead extending from the heater.

Response to Arguments

9. Applicant's arguments, see Remarks, p. 5-7, filed May 4, 2009, with respect to claims 11-15, 17-19, and 21 have been fully considered and are persuasive. The 35 USC 103(a) of January 15, 2009, has been withdrawn.
10. Applicant's arguments, see Remarks, p. 7, filed May 4, 2009, with respect to claim 20 have been fully considered and are persuasive. The 35 USC 103(a) of January 15, 2009, has been withdrawn.
11. Applicant's arguments, see Remarks, p.7-8, filed May 4, 2009, with respect to the rejection(s) of claim(s) 22 under 35 USC 103(a) have been fully considered and are persuasive in light of the prohibition of US 2002/0175077 as prior art in

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accordance with 35 USC 103(c). Therefore, the rejection base on use of this reference has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of further consideration of the teachings of IMAMURA and the abilities of a person of ordinary skill in the art.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. CHRISTOPHER BALL whose telephone number is (571)270-5119. The examiner can normally be reached on Monday through Thursday, 8:00 am to 5:00 pm (EDT).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCB
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05/14/2009

/Alex Noguera/

Primary Examiner, Art Unit 1795

May 14, 2009